STUDENT AND TEACHER LEARNING – AN OVERVIEW

What we know about teacher and student learning --- What schools and teachers need to know and be able to do

Key Findings About Student Learning
(from *HOW PEOPLE LEARN*, 14-18)

Implications for Teaching
(from *HOW PEOPLE LEARN*, 19-21)

1. Students come to the classroom with preconceptions about how the world works. If their initial understanding is not engaged, they may fail to grasp the new concepts and information that are taught, or they may learn them for purposes of a test but revert to their preconceptions outside the classrooms.

1. Teachers must draw out and work with the preexisting understandings that their students bring with them.

2. To develop competence in an area of inquiry, students must: (a.) have a deep foundation of factual knowledge, (b.) understand facts and ideas in the context of a conceptual framework, and (c.) organize knowledge in ways that facilitate retrieval and application.

2. Teachers must teach some subject matter in depth, providing many examples in which the same concept is at work and providing a firm foundation of factual knowledge.

3. A "metacognitive" approach to instruction can help students learn to take control of their own learning by defining learning goals and monitoring their progress in achieving them.

3. The teaching of metacognitive skills should be integrated into the curriculum in a variety of subject areas.

Key Findings from McREL's *Standards in Classroom Practice: Research Synthesis*, October 31, 2001

Teachers need the following knowledge and beliefs to teach students to high standards

1. Knowledge of a subject area and its connections to other fields.

2. Knowledge of how to represent subject matter to students including an understanding of student errors (pedagogical content knowledge).

3. A repertoire of instructional strategies that balances higher order interactive teaching with didactic skills instruction.

4. An understanding of how differences among students in development, culture, language, gender, and class influence student learning.

5. The capacity to adapt instruction in response to the learning needs and styles of different students.

6. Knowledge of how to assess students' learning and understanding.

7. Knowledge of how to use collaboration among students to support learning.

The following principles of teacher learning should guide professional learning opportunities

1. Consider teachers' prior knowledge and stage of career development.

2. Engage teachers in higher order thinking, problem solving, and resolving dissonances between current and more effective practices.

3. Give teachers sufficient time to practice and revise their new learnings.

4. Provide models of successful teaching performance.

5. Support new learning through collaboration with other teachers.

Characteristics of effective professional development for standards-based education

1. Focuses on a content area with direct links to the curriculum.

2. Challenges teachers intellectually through reflection and critical problem solving.

3. Aligns with goals and standards for student learning.

4. Is of sufficient duration for practice and revision.

5. Occurs collaboratively within a teacher learning community.

6. Involves all the teachers within a school or within a department.

7. Provides active learning opportunities that have direct applications to the classroom.

Teachers need the following knowledge and beliefs to teach students to high standards	**The following principles of teacher learning should guide professional learning opportunities**	**Characteristics of effective professional development for standards-based education**
8. Beliefs that all students are capable of higher order learning.		8. Is based on teachers' input regarding their learning needs.

9. Is driven by results in student performance.

10. Is ongoing and embedded in the daily lives of teachers.

11. Helps teachers meet the needs of students who are at different developmental levels and who have diverse backgrounds. |

Standards in Classroom Practice: Research Synthesis (2001) Mid-continent Research for Education and Learning (www.mcrel.org)

Implications from McREL's Research Synthesis for Classroom Practices in English Language Arts

English Language Arts Teachers must . . .

<u>**Purposefully Draw from a Repertoire of Methods**</u>
- **Assess what individual students know about language, the print-sound code, and reading and writing.**
- **Determine what individual students need to be taught explicitly and what they can discover for themselves.**
- **Help students connect language skills and concepts to applications reading and writing stories, informational reports and other texts.**
- **Select illustrative and generative phonic elements for lessons, rather than all elements from an exhaustive list.**
- **Coach students in word identification strategies.**
- **Assign workbook homework exercises and rereading of texts to increase text exposure and support fluency development.**
- **Engage students in active learning supported by manipulatives and other forms of analysis and synthesis (e.g., spelling and transforming words with plastic letters; constructing story maps and semantic maps; Test, Organize, Anchor, Say, & Test-TOAST; sorting new vocabulary terms into meaningful categories).**
- **Model strategies followed by guided and independent practice.**
- **Prepare students for upcoming state writing tests by focusing on developing the particular skills and knowledge required to meet the task demands of the test.**

<u>**Represent Out-of-School Literacy as In-School Literacy**</u>
- **Provide multi-leveled, multi-source reading material to match the interests, background knowledge, and abilities of all students in the classroom.**
- **Integrate texts from across the curriculum.**
- **Build on individual students' background knowledge and experiences.**
- **Encourage transfer of knowledge from one language to another.**
- **Use routine think-alouds to model strategic reading, including self-correction, summarizing, and other meaning-making strategies.**
- **Engage in obvious, natural, and functional uses of writing.**
- **Provide extended periods of time to simply read, talk about what was read, write, and problem solve to improve the readability of written products (e.g., discussion groups and writers workshops)**
- **Teach multiple roles for discussion groups, including discussion director, literary illuminator, vocabulary enricher, summarizer, and connector.**

Standards in Classroom Practice: Research Synthesis (2001) Mid-continent Research for Education and Learning (www.mcrel.org)